

Application No. 10/822,057
Applicant: Robert J. Tynik
Supplemental Preliminary Amendment

Amendments to the Claims:

The present listing of the claims replaces all past listings of the claims:

Listing of claims:

Claim 1. (Previously Presented) An organoammonium salt of a Group VI metal, comprising the reaction product of a metal acid hydrate of formula $\text{MO}_4\text{H}_2 \cdot \text{H}_2\text{O}$ with at least one alkyl amine, wherein M is selected from the group consisting of tellurium, selenium, and tungsten.

Claim 2. (Original) The organoammonium salt of claim 1, wherein the metal acid hydrate is the reaction product of a sodium metal dihydrate of formula $\text{Na}_2\text{MO}_4 \cdot 2\text{H}_2\text{O}$ and an acid.

Claim 3. (Previously Presented) The organoammonium salt of claim 1, wherein the reaction product of the metal acid hydrate and the alkyl amine is formed by mixing and refluxing.

Claim 4. (Original) The organoammonium salt of claim 1, wherein the alkyl amine is of the formula $\text{R}^1\text{R}^2\text{NH}$, wherein R^1 and R^2 may be identical or different, and are selected from the group consisting of hydrogen, linear or branched, saturated or unsaturated $\text{C}_2\text{-C}_{40}$ alkyl, $\text{C}_3\text{-}$

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C₄₀ cycloalkyl, C₆-C₄₀ aryl, C₇-C₄₀ alkaryl and aralkyl.

Claim 5. (Original) The organoammonium salt of claim 4, wherein R¹ and R² are selected from the group consisting of hydrogen, and a linear or branched, saturated or unsaturated C₂-C₄₀ alkyl.

Claim 6. (Original) The organoammonium salt of claim 4, wherein R¹ and R² is a linear or branched, saturated or unsaturated C₅-C₁₈ alkyl.

Claim 7. (Previously Presented) The organoammonium salt of claim 4, wherein R¹R²NH is di-tridecylamine and M is tungsten.

Claim 8. (Previously Presented) The organoammonium salt of claim 4, wherein R¹R²NH is di-n-octylamine, and M is tungsten.

Claim 9. (Previously Presented) The organoammonium salt of claim 1, wherein M is tungsten.

Claim 10. (Original) The organoammonium salt of claim 1, wherein at least one alkyl amine further comprises two different dialkyl amines.

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Claim 11. (Currently Amended) A lubricating composition comprising

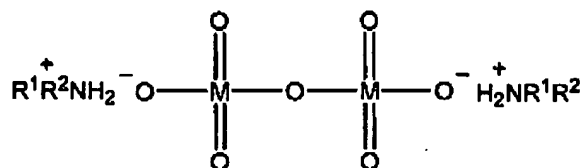
(a) a major amount of a lubricating oil, and

(b) about 0.025 to 5.0 wt.-%, based on the total weight of the lubricating composition, of an organoammonium salt of a Group VI metal, comprising the reaction product of a metal acid hydrate of formula $MO_4H_2 \cdot H_2O$ with at least one alkyl amine, wherein M is selected from the group consisting of tellurium, selenium, molybdenum and tungsten.

Claim 12. (Original) The lubricating composition of claim 11, wherein the concentration of the organoammonium salt is between about 0.05 to 2.0 wt.-%.

Claim 13. (Original) The lubricating composition of claim 12, wherein the concentration of the organoammonium salt is between about 0.09 to 0.5 wt.-%.

Claim 14. (Previously Presented) An organoammonium metal compound having the formula



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wherein (a) M is selected from the group consisting of tellurium, selenium and tungsten;
and

(b) R^1 and R^2 may be identical or different, and are selected from the group consisting of hydrogen, linear or branched, saturated or unsaturated C_2 - C_{40} alkyl, C_3 - C_{40} cycloalkyl, C_6 - C_{40} aryl, C_7 - C_{40} alkaryl and aralkyl.

Claim 15. (Original) The organoammonium metal compound of claim 14 wherein R^1 and R^2 is hydrogen, or a linear or branched, saturated or unsaturated C_2 - C_{40} alkyl.

Claim 16. (Original) The organoammonium metal compound of claim 14 wherein R^1 and R^2 is a linear or branched, saturated or unsaturated C_5 - C_{18} alkyl.

Claim 17. (Original) The organoammonium metal compound of claim 14 wherein R^1 and R^2 is a linear or branched, saturated or unsaturated C_5 - C_{18} alkyl.

Claim 18. (Currently Amended) The organoammonium metal compound of claim 14 wherein $R^1R^2NH_2^+$ is chosen from the group consisting of di-tridecylammonium and di-n-octylammonium, and M is tungsten.

Claim 19. (canceled)

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Claim 20. (Previously Presented) The organoammonium metal compound of claim 14 wherein M is selected from the group consisting of tellurium, selenium, and tungsten.

Claim 21. (Previously Presented) A process for preparing an organoammonium salt of a Group VI metal, comprising the step of:

reacting a metal acid hydrate of formula $MO_4H_2 \cdot H_2O$ with at least one alkyl amine, wherein M is selected from the group consisting of tellurium, selenium, and tungsten.

Claim 22. (Original) The process of claim 21, further comprising the step of preparing the metal acid hydrate by reacting a sodium metal dihydrate of formula $Na_2MO_4 \cdot 2H_2O$ and an acid.

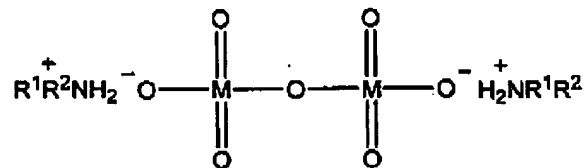
Claim 23. (Original) The process of claim 21, wherein the alkyl amine is of the formula R^1R^2NH , wherein R^1 and R^2 may be identical or different, and are selected from the group consisting of hydrogen, linear or branched, saturated or unsaturated C_2 - C_{40} alkyl, C_3 - C_{40} cycloalkyl, C_6 - C_{40} aryl, C_7 - C_{40} alkaryl and aralkyl.

Claim 24. (new) A lubricating composition comprising

(a) a major amount of a lubricating oil, and

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(b) about 0.025 to 5.0 wt.-%, based on the total weight of the lubricating composition, of an organoammonium salt compound having the formula



wherein (i) M is selected from the group consisting of tellurium, selenium, molybdenum and tungsten and (ii) R¹ and R² may be identical or different, and are selected from the group consisting of hydrogen, linear or branched, saturated or unsaturated C₂-C₄₀ alkyl, C₃-C₄₀ cycloalkyl, C₆-C₄₀ aryl, C₇-C₄₀ alkaryl and aralkyl.

Claim 25. (New) The lubricating composition of claim 24, wherein the concentration of the organoammonium salt is between about 0.05 to 2.0 wt. %.

Claim 26. (New) The lubricating composition of claim 25, wherein the concentration of the organoammonium salt is between about 0.09 to 0.5 wt. %.

Claim 27. (New) The lubricating composition of claim 24, wherein R¹ and R² is hydrogen, or a linear or branched, saturated or unsaturated C₂-C₄₀ alkyl.

Claim 28 (New). The lubricating composition of claim 27, wherein the alkyl is a C₅-C₁₈

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alkyl.

Claim 29 (new). The lubricating composition of claim 24, wherein $R^1R^2NH_2^+$ is chosen from the group consisting of di-tridecylammonium and di-n-octylammonium, and wherein M is molybdenum or tungsten.